

## PATENT ABSTRACTS OF JAPAN

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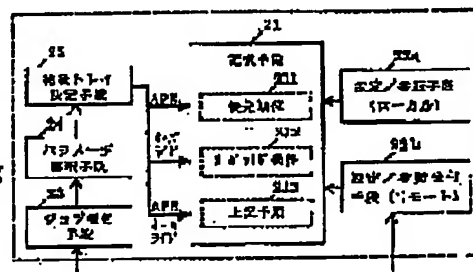
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**(54) IMAGE PROCESSOR AND IMAGE PROCESSING SYSTEM**

(57)Abstract:

**PROBLEM TO BE SOLVED:** To provide an image processor and an image processing system suitably printable on paper of a range designated or allowed by an indicator.

**SOLUTION:** This image processor comprises a storage means 21 for storing precedence of a paper quality of paper, a setting/referring means 22a for setting and/or referring the precedence, a job accepting means 23 for receiving printing indication from a client device, a parameter interpreting means 24 for specifying a printing parameter by interpreting the received printing indication, and a paper feeding tray deciding means 25 for deciding a paper feeding tray by comparing the printing parameter with the precedence read out of the storage means.



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CLAIMS

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[Claim(s)]

[Claim 1]An image processing device comprising:

A memory measure for memorizing a priority of paper quality of paper.

A printed information receiving means which receives printed information from a client apparatus.

A paper feed tray determination means to determine a paper feed tray based on said received printed information and said priority read from said memory measure.

[Claim 2]An image processing device comprising:

A memory measure for memorizing a priority of paper quality of paper.

A setting-out means for setting up said priority.

A printed information receiving means which receives printed information from a client apparatus.

A paper feed tray determination means to determine a paper feed tray based on said received printed information and said priority read from said memory measure.

[Claim 3]The image processing device according to claim 1 or 2, wherein a priority of said paper quality of paper contains a selection failure of specific paper quality of paper.

[Claim 4]An image processing device comprising:

A memory measure for memorizing Oba Reid's conditions.

A printed information receiving means which receives printed information from a client apparatus.

A paper feed tray determination means to determine a paper feed tray based on said received printed information and said Oba Reid's conditions read from said memory measure.

[Claim 5]An image processing device comprising:

A memory measure for memorizing Oba Reid's conditions.

A setting-out means for setting up said Oba Reid's conditions.

A printed information receiving means which receives printed information from a client apparatus.

A paper feed tray determination means to determine a paper feed tray based on said received printed information and said Oba Reid's conditions read from said memory measure.

[Claim 6]A near paper size in which said Oba Reid's conditions do not act as Oba Reid (those with size adjustment), The image processing device according to claim 4 or 5 being a large paper size (with no size adjustment), a near paper size (with no size adjustment), or the large paper sizes (those with size adjustment).

[Claim 7]The image processing device according to any one of claims 1 to 6 provided with a setting-out receiving means for setting up said priority or Oba Reid's conditions from a client apparatus.

[Claim 8]An image processing system which is provided with the following and characterized by enabling setting out of a priority of paper quality of paper in said image processing device.

An image processing device which memorizes a priority of paper quality of paper.

A client apparatus connected with said image processing device via a network.

[Claim 9]An image processing system which is provided with the following and characterized by enabling setting out of Oba Reid's conditions in said image processing device.

An image processing device which memorizes Oba Reid's conditions.

A client apparatus connected with said image processing device via a network.

[Claim 10]The image processing system according to claim 8 or 9, wherein setting out of said priority or Oba Reid's conditions is performed with a navigational panel of said image processing device.

[Claim 11]The image processing system according to claim 8 or 9, wherein setting out of said priority or Oba Reid's conditions is performed by a remote control from said client apparatus.

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## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention relates to the image processing system provided with the picture \*\*\*\* device which has two or more paper feed trays, and the client apparatus which performs printing directions to this image processing device.

[0002]

[Description of the Prior Art]From the former, picture \*\*\*\* devices, such as a printer, and client apparatus, such as a computer terminal, are connected via a network, and the image processing system which can perform printing directions from a client apparatus to an image processing device is known. In this kind of system, it faces printing with an image processing device, and paper selection for printing is performed based on the conditions specified with the client apparatus or the image processing device. This paper selection is divided into the function (henceforth "APS" (Auto Paper Selection)) which chooses a match as specification, and the function (henceforth "Oba Reid") which chooses a thing near when there is no match.

[0003]There is the following in paper selection based on APS and Oba Reid, for example.

- (a) APS which specifies paper quality of paper other than a paper size.
- (b) Oba Reid only for the part among the paper sizes which an image processing system can treat.
- (c) Oba Reid who ignores an appointed paper size and/or paper quality of paper.

[0004]

[Problem(s) to be Solved by the Invention]However, since any papers other than the paper quality of paper will not be chosen if paper quality of paper is specified like the above (a) at the time of paper selection, if it combines with the conditions of a paper size, a match will not be found in many cases. A paper feed tray is divided into a cassette tray and a detachable tray, and it of 4 and the latter of the former maximum number is usually 1. A detachable tray is not

usually the target of APS and Oba Reid. On the other hand, if paper quality of paper is not specified, when the paper quality of paper I do not want you to choose is set, the inconvenience that the tray will be chosen arises.

[0005]When paper selection like the above (b) is performed, sake [ paper sizes / some / target ], there is a problem that Oba Reid does not function, with the paper size besides an object. Like the above (c), by Oba Reid who ignores a paper size and/or paper quality of paper, it may become the selected result which surpassed the directions person's tolerance level, and it cannot be said that it is suitable as paper selection in such a case.

[0006]Therefore, the purpose of this invention is for a directions person to provide the image processing device and image processing system which can be printed suitably for the paper of the range specified or permitted.

[0007]

[Means for Solving the Problem]A memory measure for the above-mentioned purpose to memorize a priority of paper quality of paper, and a printed information receiving means which receives printed information from a client apparatus, It is attained by image processing device provided with a paper feed tray determination means to determine a paper feed tray based on a parameter interpretation means to interpret said received printed information and to specify a printing parameter, and said printing parameter and said priority read from said memory measure. Here, an image processing device can be further provided with a setting-out means for setting up said priority. The priority of said paper quality of paper can contain a selection failure of specific paper quality of paper.

[0008]A memory measure for the above-mentioned purpose to memorize Oba Reid's conditions, A printed information receiving means which receives printed information from a client apparatus, and a parameter interpretation means to interpret said received printed information and to specify a printing parameter, It is attained by image processing device provided with a paper feed tray determination means to determine a paper feed tray based on said printing parameter and said Oba Reid's conditions read from said memory measure. Here, an image processing device can be further provided with a setting-out means for setting up said Oba Reid's conditions. Said Oba Reid's conditions can be made into a near paper size (those with size adjustment) which does not act as Oba Reid, a large paper size (with no size adjustment), a near paper size (with no size adjustment), or the large paper sizes (those with size adjustment). Said image processing device can be provided with a setting-out receiving means for setting up said priority or Oba Reid's conditions from a client apparatus further.

[0009]An image processing system concerning this invention is provided with an image processing device which memorizes a priority of paper quality of paper, and a client apparatus connected with said image processing device via a network, and enables setting out of a priority of paper quality of paper in said image processing device. This system is provided with

an image processing device which memorizes Oba Reid's conditions, and a client apparatus connected with said image processing device via a network, and enables setting out of Oba Reid's conditions in said image processing device. A navigational panel of said image processing device can perform setting out of said priority or Oba Reid's conditions, or a remote control from said client apparatus can perform.

[0010]

[Embodiment of the Invention]Drawing 1 is a figure showing the example of composition of the image processing system provided with the image processing device concerning this invention, and the client apparatus which performs printing directions to it. As shown in a figure, the image processing devices 1, such as a printer, are connected to the client apparatus 3 and 4, such as a computer terminal, via the network 2. The picture \*\*\*\* device 1 has two or more paper feed trays. This paper feed tray is considered as four-step tray composition, for example, as shown in Table 1.

[0011]

[Table 1]

表 1

|       | 例 1        | 例 2 |
|-------|------------|-----|
| トレイ 1 | A4／普通紙     |     |
| トレイ 2 | A4／ユーザ定義 1 |     |
| トレイ 3 | A4／上質紙     |     |
| トレイ 4 | A4／再生紙     |     |

[0012]In this example, as shown in Table 1, on A4/regular paper, and the tray 2, A3/recycled paper is stored in the tray 1 in A4/paper of fine quality, and the tray 4 at A4 / user definition 1, and the tray 3.

[0013]The client apparatus 3 and 4 output printed information to the image processing device 1 if needed via the network 2. The image processing device 1 receives the printed information, and performs a printing job. In this case, when there is no paper directed from the client apparatus in a tray, the image processing device 1 chooses a predetermined paper feed tray according to the priority of paper quality of paper and/or Oba Reid's conditions which were set up beforehand, and performs printing in that paper. Hereafter, this is explained in full detail.

[0014]Setting out of the priority paper quality's of paper and Oba Reid's conditions and <example> drawing 2 are the block lineblock diagrams showing one example of the image processing device concerning this invention. This device is provided with the following. The memory measure 21 for memorizing the priority of paper quality of paper, and/or Oba Reid's conditions, as shown in a figure.

Setting out / reference means 22a for it to be local, and set up and for a navigational panel refer this priority and/or Oba Reid's conditions

Setting-out/reference receiving means 22b for a web browser etc. to set up and refer this priority and/or Oba Reid's conditions by a remote control.

The job receiving means (printed information receiving means) 23 which receives the printed information from a client apparatus, A paper feed tray determination means 25 to determine a paper feed tray based on the priority read from a parameter interpretation means 24 to interpret the received printed information and to specify a printing parameter, and a printing parameter and said memory measure 21, and/or Oba Reid's conditions.

Here, the memory measure 21 has the priority storage 211, the Oba Reid condition storage 212, and the above-mentioned procedure storage 213 of paper quality of paper. The above-mentioned procedure means here the thing of an algorithm (program) which determines a paper feed tray based on the parameter of a paper quality-of-paper priority and the Oba Reid conditions. The thick line arrow in drawing 2 shows a directions course, and a small-gage wire arrow shows a data (+ directions) course.

[0015]Setting out of the priority of paper quality of paper and the conditions of OPARAIDO is performed as follows, for example. The ON mosquito of setup instruction and the information set is carried out from local setting out / reference means 22a, or remote setting-out/reference receiving means 22b, and they are set as the applicable part of the memory measure 21.

[0016]When using a navigational panel, it is set up in the following procedures (since Oba Reid's conditions only choose one from a choice, they are omitted). First, the key of a navigational panel is operated suitably and the screen which sets up the priority of paper quality of paper is displayed. Then, since paper quality of paper and the priority set up are displayed, when changing a priority, a key is operated suitably and changed. When only a number can be used as a value showing a priority, the value showing a selection failure is set to "0", for example. The priority of all the paper quality of paper can be set as a desired value by displaying another paper quality of paper and its priority, and repeating the above-mentioned operation by operating a key suitably, as required.

[0017]When using the web browser on a client apparatus, it is set up in the following procedures. First, the ON mosquito of the URL of an image processing device is carried out to a web browser, and an image processing device is accessed. Next, the hyperlink in a Web page, etc. are clicked suitably and the page which sets up the priority of paper quality of paper is displayed. Then, since the list of groups of all the paper quality of paper which can set up a priority, and the priority of those is displayed, when changing a priority, it can carry out by clicking a desired check box and radio button, or choosing a desired choice from a selection menu.

[0018]This operation is repeated and all the priorities of the above-mentioned paper quality of paper are set as a desired value. When setting out is completed, the contents set up on the web browser are made to reflect in an image processing device by clicking a registering

button. When there is paper quality of paper to which a detachable tray turns into neither APS nor Oba Reid's object tray, and paper can be fed only by a detachable tray (for example, OHP film), a priority is not set to all the paper quality of paper that can be treated with an image processing device.

[0019]The priority of paper quality of paper as shown in drawing 3 is set up by the above, for example. That is, in this example, recycled paper and the priority 3 of a regular paper and the priority 2 are paper of fine quality, and the priority 1 lets the user definition 1 - N be selection failures "x."

[0020]Drawing 4 is a figure showing the example of the procedure of automatic paper selection in which such paper quality of paper was taken into consideration. As shown in a figure, the device is an object tray of automatic paper selection (Step 41), Do not break down (Step 42) but the paper of the appointed paper size is set (Step 43), It is judged whether there are two or more applicable trays on condition of what the paper is set to the direction in which the appointed options (for example, a punch, a staple, etc.) are possible for that the paper quality of paper set as each tray cannot choose (Step 44) (Step 45) (Step 46). As a result, when two or more applicable trays cannot be found, selection of a paper is determined as the tray. On the other hand, when there are two or more applicable trays, it is judged whether selection of a paper has two or more applicable trays further on condition of a thing with a high (Step 47) priority of paper quality of paper (Step 48). As a result, when two or more applicable trays cannot be found, selection of a paper is determined as the tray. When there are two or more applicable trays, selection of a paper is performed on condition of a thing with a high (Step 49) tray priority at the time of automatic paper selection, and, thereby, a tray is determined. Here, Step 49 specifies the priority between them to the object tray of automatic paper selection. Here, the same priority is not allowed.

[0021]On the other hand, Oba Reid's conditions serve as either of the following choices. Below make a "near" measure into area and let a "large" measure be the neighboring length (if all the appointed paper sizes can be covered, "it is large").

\*\* Don't act as Oba Reid (a sheet supply message is displayed on a user interface (UI)).

\*\* A near paper size (those with size adjustment)

\*\* A large paper size (with no size adjustment)

\*\* A near paper size (with no size adjustment)

\*\* A large paper size (those with size adjustment)

In this example, "a near paper size (those with size adjustment)" of the above-mentioned \*\* is set up as conditions for Oba Reid, for example.

[0022]The priority of paper quality of paper and Oba Reid's conditions are good also as specification with a client apparatus being possible in the case of printing directions. In this case, a choice adds "setting out of an image processing device is followed" to "what can be



set" up with an image processing device. When not specified with a client apparatus, setting out of an image processing device shall be followed.

[0023]In order to perform setting out and/or reference by the web browser of a client apparatus to the memory measure 21, a means to set up and/or refer to the data which an image processing device holds according to a http server function and the demand on a http protocol is needed for an image processing device.

[0024]Example [ of the printing directions which do not carry out < tray specification ] >, next the example of printing directions which does not carry out tray specification are explained.

Table 2 indicates the result to be the directions from a client apparatus based on Table 1 and the example of setting out of drawing 3.

[0025]

[Table 2]

表 2

| 指定と結果<br>トレイ構成 (表 1) | 指定用紙サイズ | 選択結果トレイ | 処理      |
|----------------------|---------|---------|---------|
| 例1                   | A4      | トレイ1    | APS     |
| 例2                   | 8. 5×11 | トレイ1    | オーバーライト |
|                      |         |         |         |
|                      |         |         |         |

[0026]When a specification paper size is A4 as shown in Table 2 for example, a selected result tray is the tray 1 and is determined by processing of APS. When a specification paper size is 8.5x11, a selected result tray is the tray 1 similarly, and since it is not shortly determined by APS, it is determined by Oba Reid's processing.

[0027]Processing when a <processing when the directions from client apparatus are received> image processing device receives the directions from a client apparatus is explained referring to drawing 2. First, when the job receiving means 23 receives job data and various parameters, various parameters are transmitted to the parameter interpretation means 24, and a parameter is specified. The paper feed tray determination means 25 reads the priority of paper quality of paper and/or Oba Reid's conditions which are stored in the memory measure 21, is the procedure which determined the parameter as compared with the above-mentioned specific parameter, and was decided based on this in this, and performs APS. Oba Reid is performed, when not determining a paper feed tray now and it is \*\*\*\*\* setting out about Oba Reid. Since directions with a client apparatus are made simpler, functions, such as graphical UI, can be added.

[0028]Thus, about paper quality of paper, the direction which gives a priority like this invention can make a user's intention reflect further rather than deciding and choosing it as one, and it can make possibility without an applicable tray small.

[0029]

[Effect of the Invention]According to this invention, the image processing device and image processing system which can be printed suitably for the paper of the range which a directions person specifies or permits can be obtained.

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## DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1]It is a figure showing the example of composition of the image processing system provided with the image processing device concerning this invention, and the client apparatus which performs printing directions to it.

[Drawing 2]It is a block lineblock diagram showing one example of the image processing device concerning this invention.

[Drawing 3]It is a figure showing the example of setting out of the priority of paper quality of paper.

[Drawing 4]It is a figure showing the example of the procedure of automatic paper selection in which paper quality of paper was taken into consideration.

[Description of Notations]

1 Image processing device

2 Network

3, 4 client apparatus

21 Memory measure

22a Setting out/reference means

22b Setting-out/reference receiving means

23 Job receiving means

24 Parameter interpretation means

25 Paper feed tray determination means

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[Translation done.]

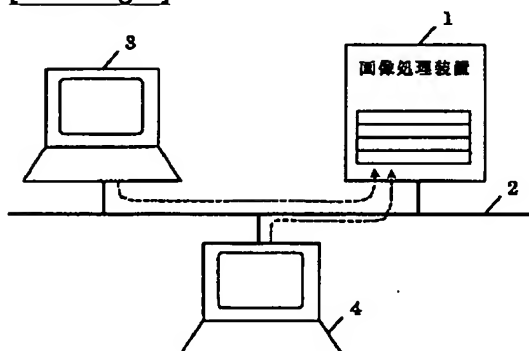
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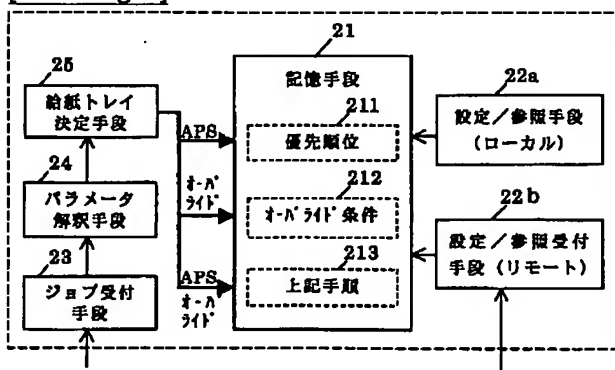
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## DRAWINGS

[Drawing 1]



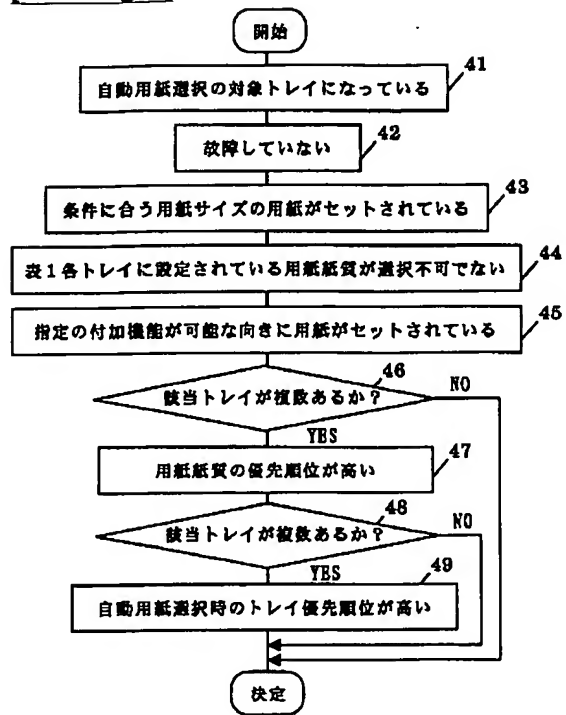
[Drawing 2]



[Drawing 3]

| 用紙紙質    | 優先順位 |
|---------|------|
| 上質紙     | 3    |
| 普通紙     | 1    |
| 再生紙     | 2    |
| ユーザ定義 1 | ×    |
| ・ 2     | ×    |
| ・       | ・    |
| ・       | ・    |
| ・ N     | ×    |

[Drawing 4]



[Translation done.]